ABSTRACT

This invention provides an MPEG video decoding system. The MPEG video decoding system includes: a buffer for storing an MPEG-formatted video signal or a DV-formatted video signal; a VLD/IQ unit for performing a variable length decoding and an inverse quantization to the video signal outputted from the buffer; an IDCT means for selectively performing an 8×8 IDCT and a 4×8 IDCT according to the format of the inversely quantized signal; an adder for bypassing and storing the output signal of the IDCT unit into an external memory if the output signal of the IDCT unit is an MPEG-formatted I-picture or a DV format, and for adding the IDCT-ed signal and a motion compensated signal and storing the added signal into the external memory if the output signal of the IDCT means is an MPEG-formatted P-picture or an MPEG-formatted B-picture; and a motion compensator for performing a motion compensation by using a motion information and a previous frame stored in the external memory and outputting the motion compensated signal to the adder, if the output signal of the IDCT means is the MPEG-formatted P-picture or the MPEG-formatted B-picture.